

sions, and the cyst after puncture was easily drawn out, its pedicle was secured, and the abdominal cavity washed out with hot boric-acid solution. One-fourth grain of morphine was given hypodermically to delay labor, as uterine contractions were noticed during the operation. On the next day, when dilatation was complete, the membranes ruptured, and the child was delivered with axis traction forceps. The patient was not permitted to bear down. The placenta was removed digitally, and a copious douche of iodine solution given. Pressure was maintained above the pubes and a large pad and binder were applied. The intra-abdominal pressure was maintained by a tight binder over the dressings. The mother made a good recovery, but did not nurse the child.

OTOLOGY.

UNDER THE CHARGE OF

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The Significance of Lumbar Puncture in the Diagnosis of Intracranial Complications of Otitis.—IWAN BRAUNSTEIN (*Archiv. f. Ohrenheil.*, Band liv., Heft 1-2.) (Published from cases in Schwartz's clinic in Halle A. S.) For the lumbar puncture in the Halle clinic an ordinary hollow needle is used, without aspiration. The puncture is made just below the fourth lumbar vertebra, with the patient lying on the side, scrupulous asepsis being observed. The fluid is allowed to flow until generally about 30 to 40 c cm. are collected, as this quantity ensures that some of the fluid comes from the cranial cavity. Only the following points in regard to the cerebro-spinal fluid obtained are considered of diagnostic worth: 1. Clearness (normal cerebro-spinal fluid should be as clear as water). 2. Presence of leucocytes in the fluid (normal fluid contains very few). 3. Presence of bacteria in the fluid (cover-glass preparations, cultures, and animal inoculation are necessary to prove the sterility; normal cerebro-spinal fluid is sterile).

Unpleasant experiences are found to follow the lumbar puncture very rarely if the puncture is carefully carried out. Two cases of death following closely on the puncture are reported; one due to aspirating the fluid with a syringe after it had ceased to flow, and the other quite as likely due to the chloroform narcosis (autopsy showed fatty degeneration of the heart). Sixty-seven lumbar punctures carried out on 48 patients are reported. Of these, 6 were meningitis purulenta, 10 were meningitis purulenta with brain abscesses, 3 were meningitis purulenta with sinus thrombosis, 1 was probable epidemic cerebro-spinal meningitis, 1 was meningitis serosa, 7 were sinus thrombosis, 3 were perisinous abscess, 2 were sinus thrombosis with encap-

ulated meningitis and brain abscess, 4 were sinus thrombosis and brain abscess, 5 were tubercular meningitis, 6 were cases of intracranial pressure presenting meningeal symptoms.

Twenty-nine times the puncture gave normal fluid (negative result). Of these, 7 were in cases of sinus thrombosis, 3 were in perisinous abscess, 7 were in brain abscess, 5 were in sinus thrombosis with brain abscess, and 7 were in cases of intracranial pressure with meningeal symptoms. On the other hand, in those cases where a general purulent meningitis existed, either alone or as a complication, the cerebro-spinal fluid showed the above-described abnormal conditions. The cases of cerebro-spinal meningitis and meningitis serosa reported are so few in number that the conclusions drawn from them have little worth.

As to the tubercular meningitis, Braunstein believes that the opalescent cloudiness of the fluid gives a fair presumption that the intracranial trouble is meningitis tuberculosa, even when the microscopical examination fails to show the presence of the tubercle bacillus.

As to the diagnostic worth of lumbar puncture in intracranial complications of otitic diseases, Braunstein concludes:

1. Obtaining by lumbar puncture normal cerebro-spinal fluid, when from its amount you can conclude that a part comes from within the cranium, rules out with great certainty a general purulent meningitis.

2. Obtaining by lumbar puncture cerebro-spinal fluid which presents the above-described abnormal characteristics proves the presence of a diffuse purulent meningitis.

On the Pathology of Deaf-mutism and the Window Niches.—**PROF. J. HABERMANN**, of Gratz, divides deaf-mutes into two classes, hereditary and acquired. The percentage of each varies with different writers. Uncher-mann found in 1885 about 1841 deaf-mutes in Norway, of whom 51 per cent. were hereditary, and the remaining per cent. were acquired, with the exception of 0.5 per cent., in whom it could not be determined. It is not always possible to determine, even by examination after death. Most cases of acquired deaf-mutism are caused by diseases of the labyrinth, most of which have spread from the brain or middle ear. Mygind, in his work in 1894, reported over 139 cases in which the middle ear only was diseased, but he stated nothing about the labyrinth or the histological examination of the labyrinth. Thus Matte could completely deny the occurrence of deaf-mutism due solely to middle-ear disease.

Habermann reports two cases in which the middle ear only was demonstrable as a cause of the deaf-mutism. He gives the gross and microscopical pathology. In the first case, a boy thirteen years, who died of general tuberculosis, two different pathological changes were found. First, a recent tuberculosis of the middle ear, which had nothing to do with the deaf-mutism. Second, in both middle ears changes of a chronic nature, which could have existed for some years. In the right middle ear great thickening of the lining, numerous adhesions binding down the ossicles, a bony closure of the round-window niche, and hyperostosis of the bone on the inner tympanic wall. On the right drum a scar, and on the left an old perforation and calcification were present—effects of a suppurative otitis media. This middle-ear sup-